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Original Article

Evolution of the ageing process, quality of life and physical fitness in western countries

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Abstract:
It is predicted that life expectancy will raise sharply in future stages, especially in western countries. In fact, life expectancy of developed countries is currently over the age of 70. Aging implies a series of physical, psychological, cognitive and social changes that condition one's self-concept, creating adaptive strategies and the knowledge to maintain one's well-being in spite of the changes. Albeit aging is a natural and inevitable process, the benefits of physical fitness on physical and functional deterioration have been thoroughly confirmed. However, although this information is widely known, the majority of elderly people of these countries execute little practice of physical activity in order to improve their Quality of Life (QoL). In response to this attitude, the aim of this paper is to argue and justify that a healthy aging process is associated with maintained health, physical and cognitive function and social participation. It shows numerous research studies which demonstrate that integrated programs of physical fitness can provide benefits in a number of predictors of QoL, such as physical functioning, physical role, general health and social functioning, self-perceived QoL and mental components. Consequently, we highlight the reasons why The American College of Sport Medicine, The American Heart Association and World Health Organization recommend regular practice of physical activity in order to produce health benefits in the elderly.
Key Words: Ageing, quality of life, physical fitness, physical activity, health.

Introduction

The current aging population is an unprecedented process in the history of mankind. It can be stated that population ages when increases the percentage of people aged 60 years (or more than that), while the percentage of children and people of working age decreases. In addition, the aging population is an almost universal process that affects virtually all countries of the world, but especially Western countries.

Consequently, this increase in longevity contributes to the aging population. In fact, it is predicted that life expectancy will raise sharply in developed countries in future stages. However, some questions emerge from this reflection in relation to increasing the lifetime of the population. Do elderly people live these extra years in acceptable parameters of quality of life? Can they really enjoy these extra years? How do they face the constraints related to health and physical and mental abilities?

Nowadays, the current concept of QoL tends to expand. The previous assessment criteria related QoL with decreased mortality and disease incidence. But in present time QoL is a broader concept in which physical and mental well-being, social functioning and emotional well-being are evaluated.

Aging implies a series of physical, psychological, cognitive and social changes that condition one's self-concept, creating adaptive strategies and the knowledge to maintain one's well-being in spite of the changes. Ageing process has an impact on physical fitness of elderly people (Ruiz-Montero and Castillo-Rodriguez, 2016a) and therefore, in the quality of life of this simple population. Due to the situation of increased years of life in which Western countries are immersed, it seems irrevocable the need to focus efforts so that aging does not distance itself from QoL.

A healthy aging process is associated with maintained health, physical and cognitive function and social participation. The physical fitness relates positively with social compromise and therefore leads to a reduction in sedentary lifestyles, which will reflect positively in health, physical condition and QoL.

In order for the benefits of physical activity to be feasible, it is crucial to practice exercise regularly. Not only following programs that increase participation in regular physical activity is of highest interest, but also improving the rate of adherence and completion of these programs. Therefore, in Western countries a need has arisen to create strategies that favor the practice of physical activity amongst elderly people.

Ageing and quality of life in Western countries

Most western countries are aware that ageing is going to increase more and more among their population in the coming decades (Vogel, Brechat, Lepretre, Kaltenbach, Berthel, Lonsdorfer et al., 2009).

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However, the low-and-middle income countries will experience the fastest demographic change in terms of the elderly population (World Health Organization, 2014). This may be alleviated with the increase of knowledge related to gerontology, as well as supporting and helping issues of well-being in elderly people (Kutner, 2008). The ageing of society represents a socio-demographic change which has been increasing in recent decades. Life expectancy of developed countries is currently over the age of 70 (United Nations, 2002). The elderly population rate is currently experiencing the fastest demographic growth (Schlenker, 1998; Truelsen, Bonita, & Jamrozik, 2001).

Moreover, the Second World Assembly on Ageing (United Nations, 2002) concluded that from 2008 to 2050, there will be an increase of 10% to almost 21% in the number of people over the age of 60. Specifically, 2 billion people in the world are going to be over the age of 60, and 400 million will be over the age of 80 and over (153). Similarly, life expectancy in European countries is 79.2 years and 82.2 years for females (European Commission, 2008) This data is the source of growing interest in the well-being of elderly people around the world (World Health Organization, 2012), regardless of geographic location or types of societies.

Global estimations by international institutions indicate that over 600 million people are over the age of 65 (Purty, Bazroy, Kar, Vasudevan, Zachariah & Panda, 2006). Therefore, the aging phenomenon needs to be addressed using suitable strategies that maintain the health and QoL of elderly people for as long as possible(Kremer, Holthuysen, & Boesveldt, 2014). The QoL has shown a negative correlation with age (Hsu, Chen, Kuo, Fan, Lee, & Hsu, 2014). Physiological changes that appear during the ageing process may affect the QoL and functionality of elderly people(Sui, LaMonte, Laditka, Hardin, Chase, Hooker, et al., 2007). However, the connection between mental components of QoL and ageing is not still clear (Budakoglu, Ozcan, Eroglu, & Yanik, 2007; Zagozdzon, Kolarzyk, & Marcinkowski, 2011).

Quality of life and physical fitness

QoL related to health is often used to evaluate the the health status of people (Hsu, Chen, Kuo, Fan, Lee, & Hsu, 2014, Miyakoshi, Hongo, Maekawa, Ishikawa, Shimada, & Itoi, 2007). Predictors of QoL are necessary in order to recognise whether elderly people enjoy well-being in their daily lives. Health status, physical fitness and social interaction with other people are the predictors (Hawkins, 2018) which improve the ageing process . The scores obtained in physical functioning (Hsu, Chen, Kuo, Fan, Lee, & Hsu, 2014), physical role, general health and social functioning have shown a decline with age in adults and elderly women (Budakoglu, Ozcan, Eroglu, & Yanik, 2007). Similarly, poor self-perceived QoL is related to lack of exercise adherence (Laforge, Rossi, Prochaska, Velicer, Levesque & McHorney, 1999). According to the mental component of QoL, some studies do not indicate any correlation with age. On the other hand, some of the elderly population will experience an increase of mental components of QoL with ageing (Zagozdzon, Kolarzyk, & MarcinKowski, 2011).

Several studies on diverse types of societies and cultures have evaluated the impact of different factors relating to QoL in elderly (Lee & Park, 2014). QoL questionnaires as predictive value have been used to report on mortality (Rumsfeld JS, MaWhinney S, McCarthy M, Shroyer ALW, VillaNueva CB, O'Brien M, et al. (1999). QoL does not determine longevity. One example could be people who live long lives but who also experience diseases, social problems or functional disability for a long time. They would be considered people with low QoL. Thus, it is necessary to introduce a healthy life year's indicator or "disability-free life expectancy" related to QoL. This would greatly help people to distinguish between years lived with or without limitations in physical functions. If elderly people manage to increase their health status, they will also live with more economic prosperity. However, various trends in longevity between genders are the reason why life expectancy, healthy life years and QoL as mean health indicators in Europe are included (European Union, 2012). Factors such as QoL and well-being must be linked to social interactions with other people (Bowling, 2005).

According to physical fitness, it is a reliable predictor of life expectancy in elderly women (Gulati, Pandey, Arnsdorf, Lauderdale, Thisted, Wicklund, et al., 2003) . The association between physical fitness and physical activity and the benefits this provides for elderly people has been explained in great detail in several studies (Landi, Onder, Carpenter, Cesari, Soldato, & Bernabei, 2007). Elderly people do not enjoy complete well-being due to the fact that they suffer from physical limitations which are commonly found in old age (Yeom, Fleury, & Keller, 2008) and associated with the limitations of physical fitness (Ferrucci, Guralnik, Studenski, Fried, Cutler, & Walston, 2004). Physical inactivity and sedentary lifestyles are both causes of negative health consequences (Ikezoe, Asakawa, Shima, Kishibuchi, & Ichihashi, 2013). In addition, a sedentary lifestyle causes fatter muscle mass decrease and physical inactivity cause a decrease of the cognitive and functional capacity (Ruiz-Montero and Castillo-Rodríguez, 2016b). The resistance exercise (American College of Sport Medicine, ACSM, 2013; Roubenoff & Hughes, 2000), Pilates exercise (Levine, Kaplanek, & Jaffe, 2009) or a mixture of both (Hayes et al., 2013; Ruiz-Montero, Castillo-Rodriguez, Mikalacki, Nebojsa, & Korovljev, 2014), improve the strength loss in the elderly. In addition, there are a lot of studies that relate the muscle strengthening activities and other aerobic activities. Some of them provide beneficial effects, while

others do not offer any significant changes (Braz, Carneiro, Oliveira-Ferreira, Arrieiro, Amorim, & Lima, 2012) in terms of intensity, duration, frequency (Manson et al., 2002), or activity (Braz et al., 2012).

Consequently, The ACSM, The American Heart Association (AHA) and World Health Organization recommend regular practice of physical activity in order to produce health benefits in the elderly (American College of Sport Medicine, 2013; World Health Organization, 2010). This would, therefore, increase the quality of life (QoL) in these elderly people (Alonso, Prieto, & Anto, 1995).

Conclusions

The recommendations on the importance of the practice of physical exercise to improve the QoL are numerous. However, in western countries elderly people tend to live sedentary lifestyles. In fact, even though the benefits of physical fitness on physical and functional deterioration have been thoroughly confirmed, the majority of elderly people of these countries carry out little practice of physical activity.

In the search for improve the QoL in elderly people, this paper defends that integrated programs of physical fitness can provide benefits in a number of predictors of QoL, such as physical functioning, physical role, general health and social functioning, self-perceived QoL and mental components.

Although more studies are required to verify the extent for physical fitness effects in the QoL of elderly people, as far as the arguments stated in this work are concerned, it can be stated that regular practice of physical activity seems to be related with the improvement of the QoL.

In conclusion, physical activity is crucial in promoting QoL and active aging due to its link with other areas involved in active aging. For this reason, it is important to highlight the numerous contributions that physical activity means for increasing the QoL. Therefore, not surprisingly, the most important associations of professionals of this field recommend regular practice of physical fitness in order to produce QoL benefits in the elderly.

Conflicts of interest - The authors of this article state that they have no conflicts of interest.

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